SOUTHWEST GAS CORPORATION

Jerome T. Schmitz, P.E., Vice President/Engineering

January 25, 2012

Ivan Garcia
Utilities Engineer
California Public Utilities Commission
Utilities Safety and Reliability Branch
180 Promenade Circle, Suite 115
Sacramento CA 95834-2939

**Re: 2011 General Order 112-E Audit of Southwest Gas Corporation's Tahoe/Truckee, California Districts 14, 15 & 16 CPUC File No. GA2011-09**

Dear Mr. Garcia:

Southwest Gas Corporation (Southwest) respectfully submits the following response to the alleged Violation and two (2) Areas of Concern noted in your report of CPUC's Pipeline Safety Inspection of Southwest's Tahoe/Truckee California Districts 14, 15 & 16 conducted on June 20-24, 2011.

**Areas of Violation: 49CFR 192.201: section (a)(2)(i), Required capacity of pressure relieving and limiting stations**

*"Each pressure relief station or pressure limiting station or group of those stations installed to protect a pipeline must have enough capacity, and must be set to operate, it insure the following."*

*"If the maximum allowable pressure is 60 psi (414 kPA) gage or more, the pressure may not exceed the maximum allowable operating pressure that produces a hoop stress of 75 percent of SMYS, whichever is lower;"*

During the field portion of the audit, we identified two regulator stations that did not lockup as required and exceeded the MAOP plus 10% of the outlet pressure. The regulator stations at New Black Bart in South Lake Tahoe and Glenshire in Truckee both failed to lockup as required and had pressures that exceeded 66 psi. The downstream MAOP for New Black Bart is 60 psi. The highest lockup pressure recorded was approximately 68 psi. The downstream MAOP for Glenshire is 60 psi. The highest lockup pressure recorded was approximately 71 psi.

Southwest crew members identified the problem and were able to complete repairs of the regulator stations as shown on work requests #1354407 and #1321106 on June 23, 2011 and June 24, 2011 respectively. As a result of the repairs, Southwest was able to lockup both regulator stations at the appropriate pressure set points.

***Southwest Response to Areas of Violation*:** Southwest did not violate any part of 49 CFR 192.201. Pursuant to this regulation, Southwest procedures and as witnessed by your inspectors, the regulators in questions were "set to operate" to ensure that at no time the maximum allowable operating pressure (MAOP) exceeded the lower value of the MAOP plus the 10% allowable build-up or a pressure that produces a hoop stress of 75% of specified minimum yield strength (SMYS). Pursuant to the Southwest Large Station Bypass Procedure **(Exhibit A)**, and witnessed by the CPUC inspectors, the regulator stations were placed on by-pass by closing the closest station block valve downstream of the regulators while the lock-up checks of the regulators were completed. The elevated pressures exhibited during the brief lock-up checks were limited to the regulator station piping. The Black Bart and Glenshire District Regulator Stations (DR) have MAOP's of 275 psig and 450 psig, respectively. The lock up pressure of 68 psig experienced at the New Black Bart DR station produced a hoop stress of 2% while the lock up pressure of 71 psig experienced at the Glenshire DR station produced a hoop stress of 2%. Since both DR stations were isolated during the lock-up tests, the downstream distribution systems were never over-pressured.

Copies of the previous maintenance records **(Exhibits B and C)** and records of the maintenance completed during the audit **(Exhibits D and E)** at the Black Bart and Glenshire District Regulator Stations, respectively, document that the pressures were properly set. The annual maintenance is completed to determine the integrity of the regulators and to ensure the station is left in proper operating condition.

**Areas of Concern #1**
We identified a record keeping issue in which Southwest does not clearly identify stand-alone galvanic pipe sections in their annual pipe-to-soil maintenance. This is more of a problem in Area 16, South Lake Tahoe, due to the recent purchase of Avista Utilities, but also found throughout areas 14 and 15 as well. According to Southwest Standard, 5.4.1, Cathodic Protection Criteria, Voltage Requirements Table, if cathodic protection systems that are stand-alone galvanic (with no impressed current) have a pipe-to-soil potential more negative than -1.750 volts, further investigation is required. In reviewing the pipe-to-soil annual records, we were unable to identify which cathodic protection systems were stand-alone galvanic pipe sections. We could not identify whether they are more negative than -1.750 volts and if they needed further investigation. Please explain how Southwest determines the sections of pipeline in its system are stand-alone galvanic sections of pipeline.

***Southwest Response to Area of Concern #1*:** Southwest agrees that the audit maintenance paperwork does not always denote if the pipe-to-soil read is on a galvanic or impressed current system. If a pipe-to-soil read potential is more negative than -1.750 volts, an investigation is initiated to determine the type of CP system. If the system is then found to be a galvanic system, an Unusual Operating Condition (UOC) work order is issued for remedial action.

**Areas of Concern 2**
During the field portion of the audit, we identified a low cathodic protection read of 0.835 mV at valve location STC-106-A, Lake Tahoe Blvd. and Midway Road. Southwest was aware of the issue

and identified it as an Unusual Operating Condition (UOC). In your response letter, please update us on the existing issue and Southwest plan to correct the UOC.

***Southwest Response to Area of Concern #2:*** The low CP read taken at valve location STC-106-A was attributed to a franchise project within Highway 50 being completed by the California Department of Transportation. UOC WR#1382550 was initiated on May 26, 2011 to track this condition for remedial action. The low CP read condition was resolved on November 21, 2011, and the cathodic protection read at this location was -1.01 volts. A copy of the completed work request is attached to this response **(Exhibit F)**.

We appreciate Staff's consideration of this matter and look forward to discussing any questions or concerns that you may have.

Sincerely,

Enclosures

c D. Gallo (electronically with attachments)
P. Gustilo
L. Malloy
J. Mathews
M. Robertson (CPUC)